



UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office  
ASSISTANT SECRETARY AND COMMISSIONER OF  
PATENTS AND TRADEMARKS  
Washington, D.C. 20231

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Paper No. 1/20

Serial Number: 485,659

Filing Date: 02/27/90

Appellant(s): SATOSHI KONG,

RECEIVED

JUN 25 1992

BOARD OF PATENT APPEALS  
AND INTERFERENCES

QB-3313

Ronald P. Kananen  
For Appellant

MAILED  
JAN 13 1993  
GROUP 350

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed on October 6, 1992.

The statement of the status of claims contained in the brief is incorrect.

A correct statement of the status of the claims is as follows:

Claims 6-8, 11-16 and 18 are pending in the application.

This appeal involves claims 11-16 and 18.

Claims 11, 13, 14, 16 and 18 are amended subsequent to the final rejection.

Claims 6-8 are withdrawn from consideration as not directed to the elected invention.

Claims 1-5, 9, 10, 17 and 19 have been cancelled.

(2) Status of Amendments After Final.

Art Unit 3502

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

The amendment(s) after final rejection filed on October 6, 1992 has been entered.

(3) *Summary of invention.*

The summary of invention contained in the brief is correct.

(4) *Issues.*

The appellant's statement of the issues in the brief is substantially correct. The changes are as follows:

The issues related to the rejections under 35 USC 112, second paragraph, are deemed to be moot in view of appellant's amendment after final.

The issues related to the rejections under 35 USC 103 over JP'542 or EP '563 are correct.

(5) *Grouping of claims.*

Appellant's brief includes a statement that claims 11-16 and 18 do not stand or fall together and provides reasons as set forth in 37 C.F.R. § 1.192(c)(5) and (c)(6).

(6) *Claims appealed.*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(7) *Prior Art of record.*

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

Art Unit 3502

57-58542 / JAPAN 10/12/1982  
0 048 563 LUIGI (EPA) 3/31/1982

(8) *New prior art.*

No new prior art has been applied in this examiner's answer.

(9) *Grounds of rejection.*

The following ground(s) of rejection are applicable to the appealed claims.

Claims 11-16 and 18 are rejected under 35 U.S.C. § 103 as being unpatentable over Japanese Patent Publication No. 57-58542 (hereinafter Pub. '542).

Regarding claims 11-15, Pub. '542 teaches a flywheel comprising an elastic plate 3 secured to a crankshaft 1, a flywheel body 9 secured to the elastic plate 3 (by a fastener 20) and having an engageable surface (see Exhibit I attached) which is engageable with a clutch disc 11. The elastic plate 3 has a predetermined axial rigidity and the engageable surface has an axial run-out as admitted by appellant in lines 2-36 on page 2 of appellant's specification.

Pub. '542 discloses the invention substantially as claimed. However, Pub. '542 does not disclose the ranges of the axial rigidity of the elastic plate and of the axial run-out of the engageable surface (e.g., 600 kg/mm to 2,200 kg/mm rigidity in claim 11).

It is common knowledge in the prior art to choose the ranges

Art Unit 3502

of the axial rigidity of the plate and the axial run-out of the engageable surface by routine experimentations in order to improve the efficiency of the flywheel.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the ranges of the axial rigidity of the plate or of the axial run-out of the engageable surface of Pub. '542 as claimed by routine experimentations in order to improve the efficiency of the flywheel.

Regarding claims 16 and 18, see regarding claims 11-15 suprar. Moreover, note a reinforcing member 24. The member 24 covers the openings 2 and defines a closed space between the plate 3 and the body 9. Appellant's claims 16 and 18 do not specifically call for an open space between the plate and the flywheel body, a fortiori, the closed space of Pub. '542 is "read on" appellant's claims. Kalman v. Kimberly Clark Corp., 218 USPQ 781 (CAFC 1983).

Claims 11-15 are rejected under 35 U.S.C. § 103 as being unpatentable over Luigi.

Regarding claims 11-15, Luigi teaches a flywheel comprising an elastic plate 11 secured to a crankshaft 13, a flywheel body 12 secured to the elastic plate 11 (by a fastener) and having an engageable surface (see Exhibit II attached) which is engageable with a clutch disc 16. The elastic plate 11 inherently has a

Art Unit 3502

predetermined axial rigidity since it is made of metal. Moreover, the engageable surface inherently has an axial run-out when the engageable surface engages and disengages a clutch facing of the clutch 16.

Luigi discloses the invention substantially as claimed. However, Pub. '542 does not disclose the ranges of the axial rigidity of the elastic plate and of the axial run-out of the engageable surface (e.g., 600 kg/mm to 2,200 kg/mm rigidity in claim 11).

It is common knowledge in the prior art to choose the ranges of the axial rigidity of the plate and the axial run-out of the engageable surface by routine experimentations in order to improve the efficiency of the flywheel.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the ranges of the axial rigidity of the plate or of the axial run-out of the engageable surface of Luigi as claimed by routine experimentations in order to improve the efficiency of the flywheel.

Regarding claims 16 and 18, see regarding claims 11-15 supra. Moreover, note a reinforcing member as seen in Exhibit II. The reinforcing member reinforces a portion 14 of the elastic plate 11 and defines an open space between the plate 11 and the body 12.

(11) *Response to argument.*

The examiner's response on pages 7 and 8 of the final rejection on October 7, 1991 is incorporated herein by reference. In the following part, the examiner addresses only the new issues that have not been responded.

PUB. '542.

First, appellant contends that his disclosure is basically not available as a reference against the claims. The Court in In re Nomiya, 184 USPQ 607 (CCPA 1975) has long laid to rest this argument. Appellant's description of Pub. '542 on pages 1 and 2 of the specification is qualified as prior art for any purpose including the use of evidence of obviousness under 35 USC 103.

Second, appellant contends that Pub. '542 only discloses the undesirable noise problem. This contention directly conflicts with the express language in line 35 on page 1 through line 36 on page 2 of appellant's specification. Appellant plainly describes that in Pub. '542 the elastic plate has an axial rigidity and the engageable surface of the flywheel has an axial run-out.

Third, appellant contends that Pub. '542 does not solve the problems that appellant try to solve. The Court in In re Dillon, 16 USPQ 2d 1897, 1901 et seq. (CAFC 1990) has pointed out that the prior inventor and appellant do not need to solve the same problem(s).

Fourth, appellant avers that the examiner should provide

Art Unit 3502

evidence to support the purported "common knowledge" in determining the various ranges of the rigidity and the axial run-out. Appellant overlooks the fact that if the knowledge is of such notorious character, the examiner should not be obliged to spend time to produce documentary proof. MPEP 706.02(a). In the case at hand, the law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. See, e.g., Gardner v. TEC Sys., Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir.), cert. denied, 469 U.S. 830 [225 USPQ 232] (1984); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980); In re Ornitz, 351 F.2d 1013, 147 USPQ 283 (CCPA 1965); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955). These cases have consistently held that in such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range. Gardner, 725 F.2d at 1349, 220 USPQ at 786 (obviousness determination affirmed because dimensional limitations in claims did not specify a device which performed and operated differently from the prior art); Boesch, 617 F.2d at 276, 205 USPQ at 219; Ornitz, 351 F.2d at 1016-17, 147 USPQ at 286; Aller, 220 F.2d at 456, 105 USPQ at 235. The instant appellant has made no such showing in the same manner as the appellant in In re Woodruff, 16 USPQ 2d 1934, 1936 (CAFC)

1990).

With respect to claims 16 and 18, appellant avers that the stopper plate 24 has to be on the opposite side of the elastic plate 3 in order to reinforce the plate. Contrary to appellant's subjective observation, the plate 24 inherently reinforces the plate 3 because the fastener 2 holds the plates 3 and 24 together as seen in Fig. 4. The plates 3 and 24 are overlapped partially. The portion of the plate 3 which is overlapped with the plate 24 is inherently strengthened or reinforced.

With respect to the space in claims 16 and 18, the fact that the space of Pub. '542 is a closed space is immaterial since appellant's claims make no mention about an open space. See In re Self, 213 USPQ 1, 5 (CCPA 1982).

LUIGI

Appellant contends that Luigi is silent about the level of axial rigidity and axial run-out. Even though Luigi is silent about the range of rigidity and axial run-out, however, Luigi's elastic plate inherently has a rigidity because it is made of metal, and Luigi's engageable surface inherently has an axial run-out when the fly-wheel is engaged or disengaged with the clutch. To choose the ranges in Luigi device is within common knowledge of one having ordinary skill in the art. See In re Woodruff, supra.

Finally, with respect to the space in Luigi's device, see

Serial No. 485659

-9-

Art Unit 3502

Exhibit II attached.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Luong/ph  
January 11, 1993  
January 12, 1993

VINH T. LUONG  
PRIMARY EXAMINER  
ART UNIT 352

RONALD P. KANANEN  
MARK MURASE + WHITE  
SUITE 750  
2001 L. STREET N.W.  
WASHINGTON, D.C. 20036

MAILED

JAN 13 1993

GROUP 350

(3)

特公 昭57-58542

5

EXHIBIT - I

6

つて徐々に接触され、打音の発生、摩耗による破損等の不具合発生はない。

なお、上記ガイドストップパブルート24を設けたことにより弾性円板3の曲げ剛性を大きく低下させることができとなり、充分にクラランク軸系の固有曲げ振動数を下げることができるものである。

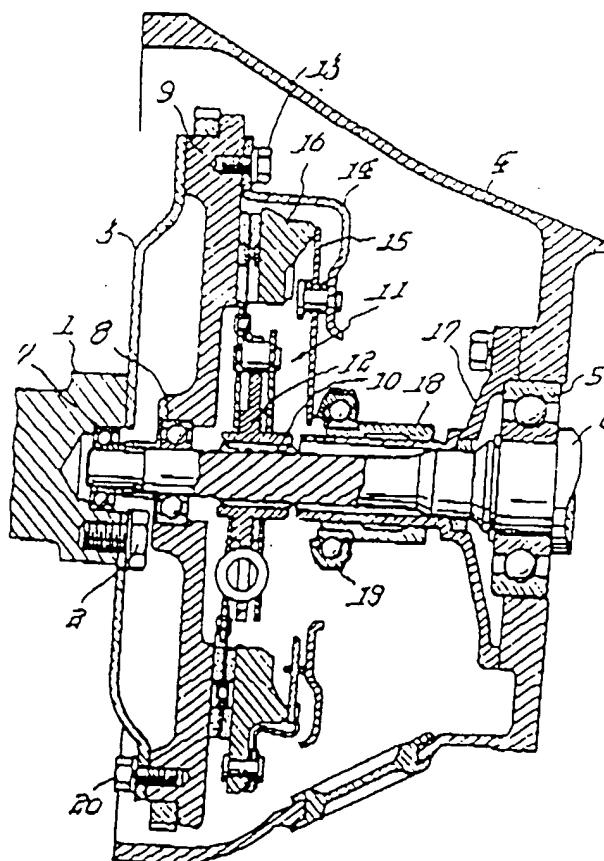
## 図面の簡単な説明

第1図は本発明の第1実施例を示す断面図、第2図は上記第1実施例の変形例を示す断面図、第3図は上記第1実施例の他の変形例を示す断面図、第4図は本発明の第2実施例を示す断面図、第5図は上記第2実施例の側面図である。

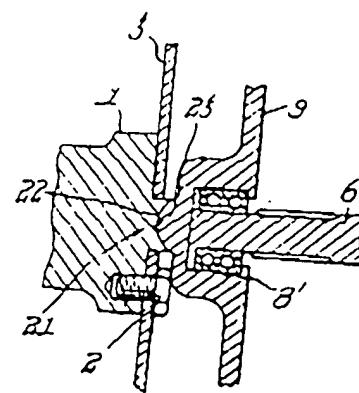
第1図、第4図は本発明の第2実施例を示す断面図、第5図は上記第2実施例の側面図である。

1: クランクシャフト、2: ボルト、3: 弾性円板、4: クラッチハウジング、5, 7, 8, 8': ベアリング、6: メインドライブシャフト、9: フライホイール、11: クラッチディスク、17, 17': フロントカバー、20: ボルト、21, 21': 球面軸受、24: ガイドストップパブルート、27: 円孔。

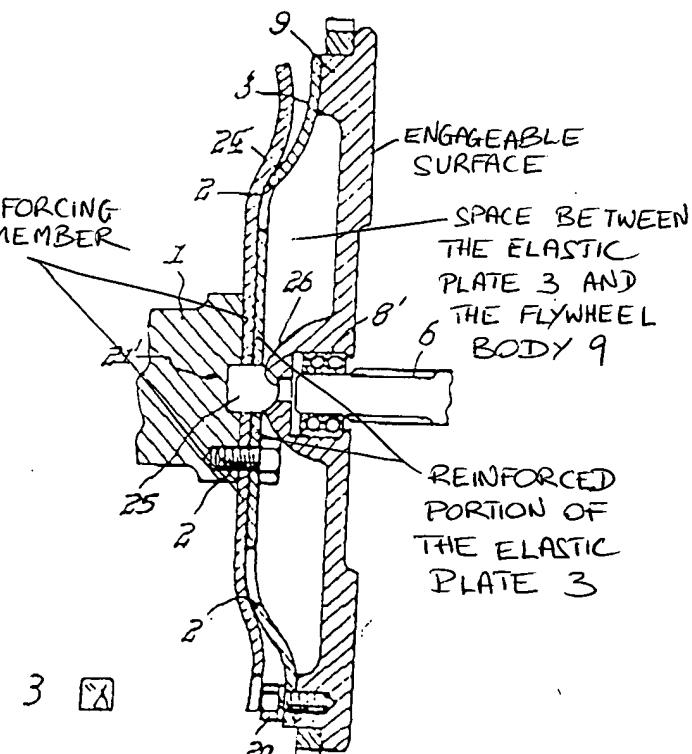
第1図



第3図



第4図



## EXHIBIT II

1/2

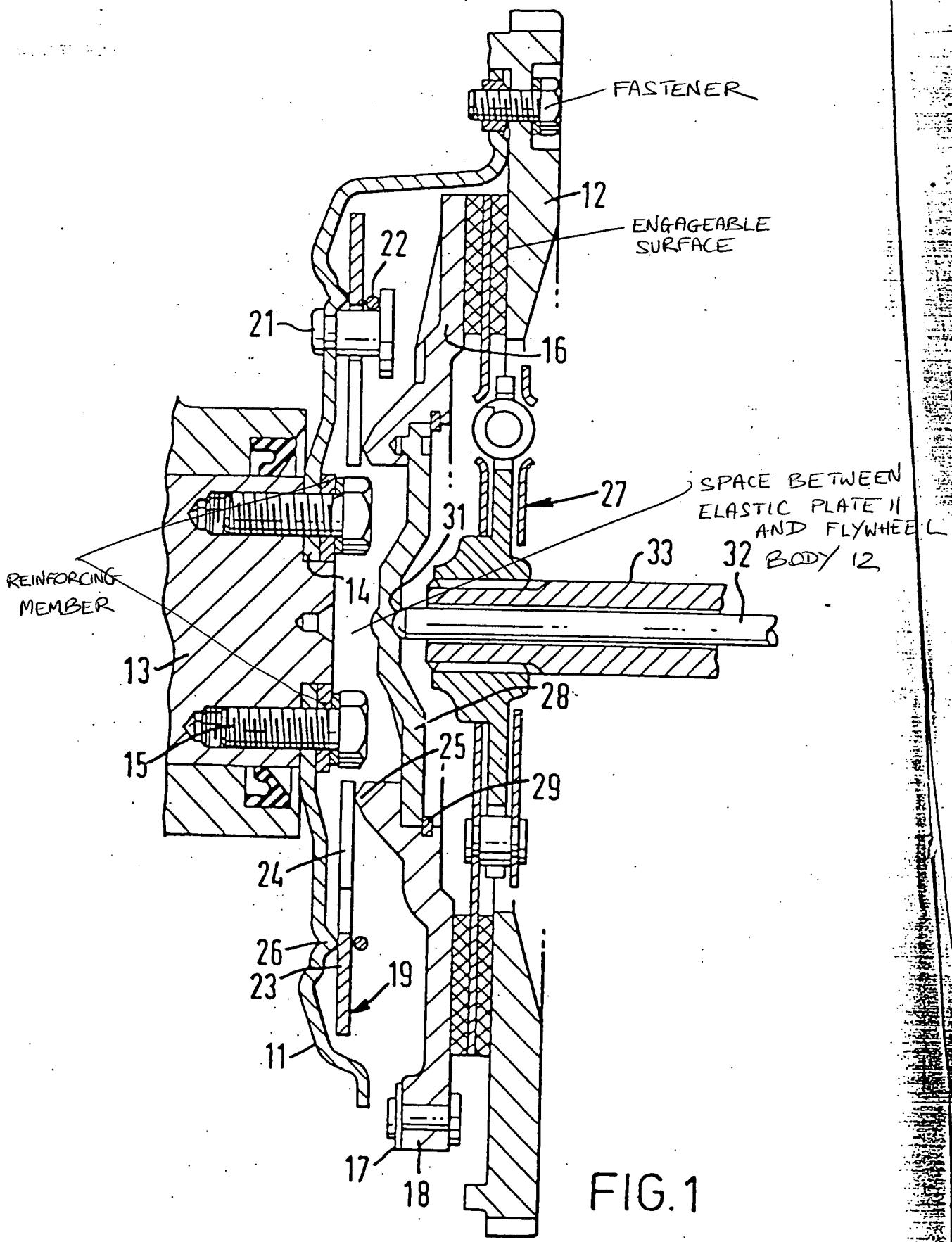


FIG.1